FSF3847 Convex optimization with engineering applications
Spring 2023
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Homework Assignment 3
Due Friday April 28 2023

Exercise 3.1. Solve Exercise 5.1 in *Convex Optimization*, p. 273.

Exercise 3.2. Solve Exercise 5.17 in *Convex Optimization*, p. 278.

Exercise 3.3. Solve Exercise 5.20 in *Convex Optimization*, p. 279.

Exercise 3.4. Solve Exercise 5.39 in *Convex Optimization*, p. 285.
Remark: Note that if $M \in \mathbb{R}^{n\times n}$, $M = M^T$, and $x \in \mathbb{R}^n$, then $x^TMx = \text{trace}(x^TMx) = \text{trace}(Mxx^T)$.

Good luck!